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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,051	03/18/2004	Ronald S. Plantan	011351.52877US	4611

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CROWELL & MORING LLP
INTELLECTUAL PROPERTY GROUP
P.O. BOX 14300
WASHINGTON, DC 20044-4300

EXAMINER

BURCH, MELODY M

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/803,051	Applicant(s) PLANTAN, RONALD S.	
	Examiner Melody M. Burch	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Drawings

1. The drawings are objected to because the drawings include new matter see the specification objection below. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

- The phrase "outer radius 7 (corresponding to the inner radius of connecting portion 4) to an inner radius 8 of friction portion 3 (corresponding to the outer radius of connection portion 4)" in line 3 of paragraph [0022] should be changed back to its original form since the original language coincided with the drawings. The connecting portion extends axially from portion 7 of the hub to portion 8 of the friction portion.

Appropriate correction is required.

3. The amendment filed 7/5/05 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: Examiner notes that the arrangement of the brake components is critical to the invention. In light of the criticality of the brake component arrangement, Examiner notes that the original disclosure fails to provide support for the added phrase in lines 5-6 of paragraph [0024] in which it is stated that flange portion 4 extends "far enough to place friction portion 3 and its associated caliper and mounting bracket 20 outside the envelope of wheel 12". The original specification and the drawings show only the arrangement of the friction portion with respect to the wheel. The amendment to figure 2 also includes more detail than is supported by the original disclosure. For example, the use of bolts as connecting members between a caliper and a caliper mount as well as between the caliper mount and the vehicle axle is not described in the original specification.

Applicant is required to cancel the new matter in the reply to this Office Action.

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification fails to provide proper antecedent basis of the terms "caliper mount" recited in claim 16.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-5, 7, 8, 10, 11, 13, 14, 16-18, 20, 21, 23, 24, 26, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 2655237 to Benson.

Re: claims 1, 2, and 16. Benson shows in figure 1 a brake disc comprising a hub portion 7, a friction portion 19, the friction portion formed as a generally planar ring as shown in figure 4 and a connecting flange portion 13, wherein the connecting flange portion extends from an outer radius of the hub portion to an inner radius of the friction portion as shown, the connecting flange portion has a length such that when the hub portion and a wheel rim 10 adapted to be mounted on a hub end of a vehicle axle 5 are located at the hub end of the axle, the friction portion is outboard of the wheel rim as shown, and the friction portion has an outer radius shown at the top of element 19 greater than an inner radius of the wheel rim as shown.

Re: claim 3. Benson shows in figure 1 the brake disc being a one-piece brake disc in the sense that the parts are combined to form one piece as shown.

Re: claims 4, 5, 17, and 18. Benson shows in figure 1 the limitation wherein at least one heat-conducting limiting section is provided on at least one of the connecting flange portion and the friction portion, particularly the connecting flange in the area around the lead line of number 56 as that area includes a section having a reduced thickness.

Re: claims 7, 8, 20, and 21. Benson shows in figure 1 the limitation wherein at least one ventilation aperture (shown surrounding element 14) is provided in the connecting flange portion.

Re: claims 10, 11, 13, 14, 23, 24, 26, and 27. Benson shows in figure 1 the limitation of wherein a plurality of cooling fins 35 are disposed about (to the right of) an inner radius of the friction portion.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6, 9, 12, 15, 19, 22, 25, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Benson.

Re: claims 6 and 19. Benson describes the invention

Art Unit: 3683

substantially as set forth above including the limitation of at least one heat conduction limiting section including a section having a reduced thickness, but does not show the limitation wherein the reduced thickness section is ring shaped.

In *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) the court held that the configuration of a claimed object was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration is significant.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the connecting flange portion or the friction portion of Benson to have included a ring-shaped reduced thickness section in order to provide a means of reducing the amount of material used to make a portion of the brake disc.

Re: claims 9 and 22. Benson shows in figure 1 the limitation wherein at least one ventilation aperture (shown in the area of the portion of element 7 surrounding element 14) is provided in the connecting flange portion.

Re: claims 12, 15, 25 and 28. Benson shows in figure 1 the limitation of wherein a plurality of cooling fins 35 are disposed about (to the right of) an inner radius of the friction portion.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1 and 16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 3 of copending Application No. 10/803050 in view of Benson. With regards to claim 1 of the instant invention and claim 1 of the copending application, both claims recite a hub portion, a friction portion or rotor, a connecting portion, a wheel or wheel rim, and the limitation of the rotor or friction portion extending such that it is arranged outside the envelope of the wheel or outboard of the wheel rim, but the copending application does not include the limitation of the rotor or friction portion having an outer radius greater than an inner radius of the wheel rim or wheel.

Benson teaches in figure 1 the use of a friction portion 19 having an outer radius that is greater than the inner radius of the wheel rim 12.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the arrangement of the friction portion and the wheel rim of the copending application to have had the outer radius of the friction portion being greater than the inner radius of the wheel rim, as taught by Benson, in order to provide a means of easily accessing the rotor or friction portion for reconditioning purposes, for example.

With regards to claim 16 of the instant application and claim 3 of the copending application, both claims recite a vehicle axle assembly, a vehicle axle, a disc brake, a caliper, a hub portion, a friction portion or rotor, a connecting portion, a wheel or wheel rim, and the limitation of the rotor or friction portion extending such that it is arranged outside the envelope of the wheel or outboard of the wheel rim, but the copending application does not include the limitation of the rotor or friction portion having an outer radius greater than an inner radius of the wheel rim or wheel.

Benson teaches in figure 1 the use of a friction portion 19 having an outer radius that is greater than the inner radius of the wheel rim 12.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the arrangement of the friction portion and the wheel rim of the copending application to have had the outer radius of the friction portion being greater than the inner radius of the wheel rim, as taught by Benson, in order to provide a means of easily accessing the rotor or friction portion for reconditioning purposes, for example.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

11. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection. Upon further review of the broadly recited claim language and the device set forth in the Benson reference, Examiner has determined that connecting portion 13 can be interpreted as extending from an outer

radius of the hub portion to an inner radius of the friction portion. As shown in figure 1 of Benson element connecting portion 13 extends in an axial direction from an outer radius of the hub portion 7 to an inner radius of the friction portion 19 (the inner or left radius of the friction portion 19 in one interpretation being the axially inner radius of the friction portion 19 that is inner with respect to the outer or right radius of element 19 positioned adjacent the fins 35). In an alternate interpretation, it is noted that the outer radius of the hub portion is shown to the left of figure 1 and the inner radius of the friction portion (interpreting the inner radius of the friction portion to be the radial inner radius of the friction portion) is shown to the right of the figure 1 and the connecting portion 13 extends axially in the direction from the outer radius of the hub portion to the inner radius of the friction portion.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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September 1, 2005

Melody M. Buell
9/1/05